



A CENTURY *100* OF PROGRESS

CENTRAL VALLEY FLOOD PROTECTION BOARD | 1911–2011

Celebrating 100 years of Flood Management




100 YEARS

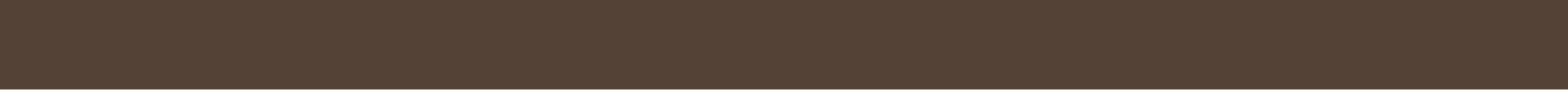


A C E N T U R Y O F P R O G R E S S

CENTRAL VALLEY FLOOD PROTECTION BOARD | 1911-2011



MISSION STATEMENT | **To control flooding** along the Sacramento and San Joaquin Rivers and their tributaries in cooperation with the U.S. Army Corps of Engineers. **To cooperate with various agencies** of the federal, State and local governments in establishing, planning, constructing, operating, and maintaining flood control works. **To maintain the integrity** of the existing flood control system and designated floodways through the Board's regulatory authority by issuing permits for encroachments.





IN 2011, THE CENTRAL VALLEY FLOOD PROTECTION BOARD | celebrated its 100th year as the State agency that provides flood management for the Sacramento and San Joaquin Rivers and their tributaries, and protects lives and property from the effects of flooding along the most flood-prone area of California — the Central Valley.

CELEBRATING 100 YEARS OF

Created by the California Legislature in 1911, the Board, in its regulatory role, has spent the past ten decades serving as the liaison between the State of California, its residents, property owners, Central Valley agencies, and the United States government, working to ensure that the public receives the highest level of flood protection possible, while also considering environmental and habitat concerns.





FLOOD MANAGEMENT

The Board and its Authority

The Board is comprised of seven members appointed by the Governor and confirmed by the Senate, who bring diverse areas of expertise to the Board, and two non-voting, ex-officio members from the California Legislature. The Board has jurisdictional authority throughout the drainage basin of the Central Valley and for the 1.7 million acres within 14 counties that make up the Sacramento and San Joaquin Drainage District.

Under California law, no modification to the federal/ State flood control system, encroachment, or project may be constructed on or near the Sacramento and San Joaquin Rivers or their tributaries until plans have been reviewed and the projects have been approved or

issued a permit by the Board. Board members' efforts focus on reducing flood damage by managing the floodway, protecting Central Valley levees from erosion, and controlling encroachment into flood-plains and onto flood control works (such as levees, channels, weirs, and pumping plants). The monthly public Board meeting provides an open forum where all interests may express their views regarding flood management.



Partnerships

USING BOTH STRUCTURAL AND NONSTRUCTURAL MEASURES, the Board accomplishes its mission by working in partnership with local agencies, the Department of Water Resources (DWR) and the U.S. Army Corps of Engineers (Corps), to fund and build flood control projects. Private land-owners have also assisted the Board in providing improvements to portions of the system.

C E L E B R A T I N G 1 0 0 Y E A R S O F

The Corps has been the primary source of funding, but in recent years the State and local governments have stepped up to put money in for projects as well. The Board encourages and nurtures these partnerships. In its agreements with the Corps, the Board fulfills the State's cost sharing responsibilities to the federal government by providing lands, easements, rights of way, relocations, and cash payments for Corps flood control projects. When a project is completed, the Board accepts responsibility for the project and transfers it to a local agency to operate and maintain. The Board also plans and adopts designated floodways, nonstructural means of ensuring the safe and continued passage of flood flows through historical floodways. It has adopted more than 1,300 miles of such floodways in the Central Valley.



Modern day flood protection measures can provide valuable opportunities for conservation; conservation of habitat for various species, as well as open space itself.





WORKING TOGETHER

Integrating Environmental Concerns

The Central Valley Flood Control System is home to hundreds of native terrestrial and aquatic species some of which are threatened or endangered. In carrying out its programs, with flood protection as its priority, the Board also gives serious consideration to the environmental effects of its actions and attempts to preserve or enhance existing habitat wherever possible.

Board members and staff work closely with the California Department of Fish and Game (DFG), U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NOAA Fisheries) to consider the impacts of flood control works on the environment. The Board leases a portion of its land to DFG for habitat enhancement and several national wildlife refuges share land within the flood control system.

Achievements

AN ACTIVE, HISTORICAL PERIOD IN FLOOD SYSTEM IMPROVEMENT |

Not since the early 1900s has there been more interest and activity in flood management in the Central Valley.

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The past several decades have brought a remarkable increase in interest and activity regarding flood management in the Central Valley. The need to protect expanding populations and important infrastructure from flooding was vividly brought to light by the collaboration between the Department of Water Resources, the U.S. Army Corps of Engineers, and the Central Valley Flood Protection Board. This increased public awareness of the flood dangers to the region has resulted in:

- large-scale studies and evaluations of the geotechnical make-up of the valley's levees and their deficiencies;
- intensive research and the discovery that levees were not failing due to overtopping, but instead from through-seepage and under-seepage;
- careful inspections identifying unauthorized encroachments that could weaken levees and prevent flood-fights;
- designation of the Sacramento and Central Valley areas as the country's most vulnerable to potential flooding, after lessons from Hurricane Katrina's massive destruction; and
- voter approval of billions of dollars in bond money to provide funding for flood improvement.

The Board, working in concert with the Corps, DWR, and local agencies, approached the multitude of challenges head-on. The members researched and visited areas of concern. They heard and discussed the public's concerns. Ultimately, they voted and approved many permits that gave the go-ahead to projects, large and small, that:

- added critical improvements to the Central Valley's current structural flood control system
- initiated construction of new projects in identified flood-prone areas
- began feasibility studies in areas that desperately needed a system of flood management
- utilized new and proven engineering methods, such as cut-off wall construction to block under-seepage and through-seepage, and constructed new setback levees
- engaged property owners to remove unauthorized encroachments.

Since 2006, an unprecedented number of projects were permitted and completed by the Board and its partners.



PROTECTION



Legislative Changes Expanded the Board's Responsibilities and Authorities (2007 and 2009)

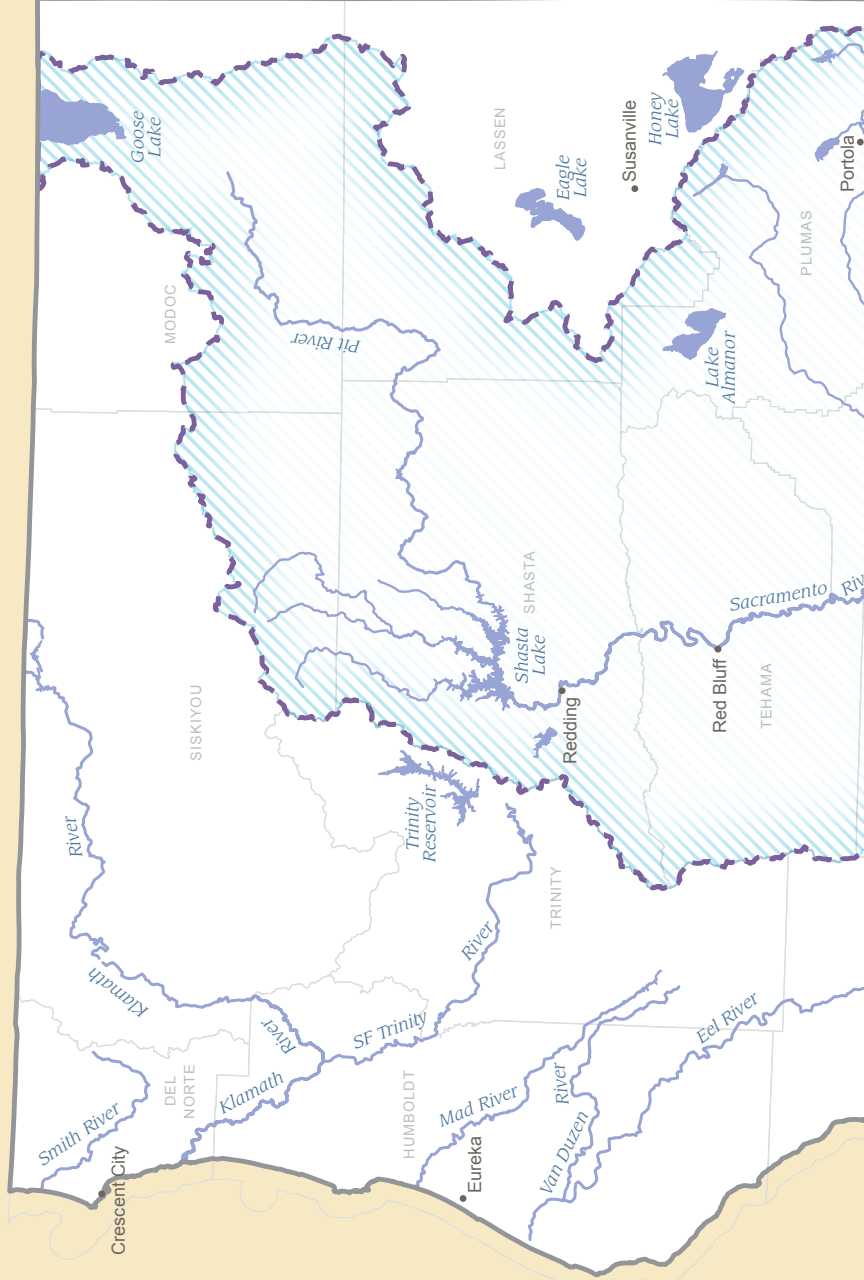
- Changed the name of the Reclamation Board to the Central Valley Flood Protection Board to better reflect the Board's current and future mission
- The Board received its own funding as a separate agency in the Governor's budget
- Applied ex-parte communications rules to Board members
- Increased the Board's present and future encroachment enforcement authority, giving the Board the authority to issue cease and desist orders, the violation of which may lead to potential monetary penalties
- Added responsibility for reviewing, commenting, approving, or adopting key reports and plans dealing with the flood system status, building and development, and flood system improvements in the Central Valley, such as:
 - the approval and adoption of the Central Valley Flood Protection Plan in 2012, including the flood control system status report
 - reviewing and commenting on the proposed amendments to the CA Building Standards Code for new construction
 - approving the schedule for mapping areas at risk of flooding in the Sacramento River and San Joaquin River drainage basins
 - providing comments on the proposed amendments to safety elements of the general plans of the cities and counties located within the Sacramento-San Joaquin Drainage District, which encompasses 1.7 million acres within 14 counties in the Central Valley

Board/Corps Projects

- A** Sacramento River Bank Protection Project and Sacramento River Flood Control (GRR) (System Evaluation)
- B** Middle Creek (Flood Damage Reduction and Ecosystem Restoration Project)
- C** Mid-Valley Area Levee Reconstruction Project
- D** Lower Cache Creek, Yolo County, Woodland and Vicinity (Feasibility Study)
- E** American River Watershed (Common Features) and GRR
- F** West Sacramento Project and GRR

- G** Hamilton City (Flood Damage Reduction and Ecosystem Restoration Project)
- H** Yuba River Basin Project and GRR
- I** Sutter County (Feasibility Study)
- J** American River Watershed (Folsom Dam Modifications) Joint Federal Project (JFP)
- K** American River Watershed (Folsom Dam Raise)
- L** South Sacramento County Streams Project
- M** Sacramento-San Joaquin Delta, Delta Islands and Levee (Feasibility Study)

- N** San Joaquin River Basin, Lower San Joaquin River (Feasibility Study)
- O** San Joaquin River Basin, West Stanislaus County, Orestimba Creek (Feasibility Study)
- P** Merced County Streams Group
- Q** Terminus Dam, Lake Kaweah Flood Control Project
- R** San Joaquin River Basin, White River/Deer Creek (Feasibility Study)
- S** San Joaquin River Basin, Frazier Creek (Feasibility Study)



Jurisdictional Boundary of the Board

Central Valley Integrated Flood Management Study
(Formerly known as the Sacramento-San Joaquin River Basins Comprehensive Study)

DELTA LEVEE MAINTENANCE SUBVENTIONS PROGRAM | Every year the Board reviews, approves, and enters into an agreement with local agencies for funding of this critical maintenance grants program authorized by the California legislature in 1973.

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The purpose of the program is to “preserve the physical characteristics of the delta essentially in the present form” and involves more than 60 reclamation districts in the Delta and Suisun Marsh to maintain, plan, and complete levee maintenance projects to improve the flood control system and provide protection to public and private investments in the Delta including water supply, habitat, and wildlife.

Historically, the Subventions Program funds averaged about \$6 million annually. The maintenance work covers approximately 650 miles of levees, both project and non-project. Since the passage of Propositions 1E and 84, the funding level for the Subventions Program has significantly increased. The table below summarizes the funding level and the actual state reimbursements through the FloodSAFE program.

Fiscal Year	Maximum Reimbursement (\$)	Total Project Cost (\$)	State Reimbursement (\$)
2007–08	25.75 million	23 million	16 million
2008–09	20 million	17 million	12 million
2009–10	18 million	13 million	9.2 million
2010–11	15 million (proposed)	13 million (estimated)	9.2 million (estimated)





INVESTMENT

Tackling Liability Issues

Actions taken by the Board since the 2003 Paterno vs the State of California case, in which the State was found liable for damages to property from a levee failure, include the following:

Joint Powers Agency agreements — while these entities assist the State and advance public safety by providing a single policy body that enables multiple local public agencies to be involved in flood management planning and activities, there was no agreement with the JPA to insure perpetual, continued operation and maintenance responsibility when a JPA dissolves. The Board, after public review and input, enacted a resolution which encourages the local JPA to furnish operation and maintenance assurances for the project and indemnify the State and federal governments from liability arising from that operation and maintenance.

LPCA agreements — agreements between the State and the local maintaining agency were modified to crystallize each agencies' responsibilities and reiterate that the local maintaining agency will hold the state and its agencies harmless from all claims and damages arising from the project undertaken.

Permit conditions — using Title 23 as a guide, the Board's permit conditions were modified to reflect the current environment, and general special conditions, as well as site specific conditions.

Non-conforming encroachments — with the recent legislated strengthening of the Board's enforcement authority, and through its Enforcement Branch, the Board reduces liability for loss of life and property by ordering the repair or removal of levee vulnerabilities and code violations.

“The best way to reduce liability is to eliminate the danger.”

CENTRAL VALLEY FLOOD PROTECTION BOARD LAUNCHED THE CALIFORNIA LEVEE ROUNDTABLE to address the conflicting federal mandates facing flood management agencies in the Central Valley.

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The goal of the Roundtable was to determine the best approach for the Central Valley ... and at the same time protect the natural resources and valuable habitat that exists within the floodway.

In the Spring of 2007, the U.S. Army Corps of Engineers (Corps) released its draft white paper – “Treatment of Vegetation within Local Flood Damage Reduction Systems,” requiring that all states remove vegetation from their levees in order to comply with Corps standards. This Corps white paper release resulted in an outcry from California’s resources agencies and local flood control and maintenance agencies regarding the effects of this policy on riparian habitat, recreation, levee stability, maintenance guidelines, and the use of funds from the newly voter-approved bond measure for flood control improvement.

In August of 2007 the Central Valley Flood Protection Board founded the California Levee Roundtable (Roundtable) to address the conflicting federal mandates facing flood management agencies in the Central Valley. The Roundtable is comprised of high ranking representatives from nine federal, State and local agencies that are involved in regulating or performing activities within the Board’s jurisdiction. The goal of the Roundtable was to determine the best approach for the Central Valley to comply with the Corps’ Engineering Technical Letter 1110-2-571, and at the same time protect the natural resources and valuable habitat that exists within the floodway.

In March of 2009 the Roundtable adopted the “California’s Central Valley Flood System Improvement Framework” (Framework) which is intended to serve as a bridge agreement between all participants in the Roundtable on how to manage vegetation while the State develops the Central Valley Flood Protection Plan (CVFPP). The Board also requested, and received, a temporary exemption from the Corps’ ETL 1110-2-571. The exemption request runs through July of 2012, when the Central Valley Flood Protection Plan will be adopted.

In addition, the Board co-sponsors the California Levee Vegetation Research Program to develop a scientific understanding of the risk factors associated with vegetation on levees and thereby inform engineering judgment with respect to vegetation management on levees.

The Board will continue to work with the Corps to develop a formal, written, regional vegetation variance policy, based on documented science, that allows flexibility for managing existing vegetation for public safety and natural resource conservation. The Board agrees that vegetation must be managed to provide the greatest safety factors and flood protection benefits; however, State and federal laws require us to maintain the vegetation on the water side of levees that is currently providing habitat for many aquatic and terrestrial species at risk.



IMPROVEMENTS



Going Forward

THE BOARD IS COMMITTED to continuing to reduce flood risk and to preserve and enhance the integrity of the flood system in the Central Valley. The Board's highest priorities will focus on four strategic areas.

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- 1 | Preserve the integrity of existing facilities
- 2 | Enhance levels of flood protection
- 3 | Facilitate integration of environmental enhancement into flood management
- 4 | Improve stakeholder understanding of residual flood risk

By making strides in these four areas and with proper planning and preparation, the people of the Central Valley will avoid much flood damage and heartache.





STRATEGY

Key Strategic Goals

Preserve the Integrity of the Existing Facilities

The Board will continue to work with its local, State and federal partners to ensure that the existing flood protection system performs at least to the level of the authorized design. We will continue our inspection program and work with local and State partners to address identified maintenance deficiencies. Existing unauthorized and unsafe encroachments will be prioritized and addressed based on their impact on flood risk.

At the same time we will continue our efforts to update the California Code of Regulations, Title 23 to reflect current engineering methods and standards and streamline and improve the Board's permitting process.

Enhance Levels of Flood Protection

The Board will continue to assist project proponents in identifying and implementing projects that improve public safety and system performance. In 2012, the Board will engage stakeholders in the review of the Central Valley Flood Protection Plan (CVFPP) to seek their input and suggestions for improving the plan before adopting the first system wide flood protection plan for the Central Valley. The CVFPP will frame the State's interest in reducing flood risk within the Sacramento and San Joaquin River watersheds thereby enabling local interests to identify and formulate regional flood management programs that will receive State financial support.

In parallel, the Board will collaborate with our federal partner, the U.S. Army Corps of Engineers, on the development of the Central Valley Integrated Flood Management Study (CVIFMS) that will define the federal interest in the CVFPP. The Board will work closely with local and federal partners on the implementation of the CVFPP and the CVIFMS and encourage them to develop multiple benefit programs that include sustainable flood management, resource conservation enhancements, and improvements to water supply.

(continued next page)

An aerial photograph showing a winding river or canal through a landscape of agricultural fields. The fields are in various shades of green and yellow, indicating different crops or stages of growth. The river is a deep blue, and its banks are lined with trees and vegetation. The overall scene is a mix of natural and man-made elements, typical of a rural or agricultural area.

Key Strategic Goals (continued)

Facilitate Integration of Environmental Enhancement into Flood Management

The Board is committed to improving environmental integration with flood management in a manner that does not reduce public safety. The Board will continue its leadership role in the California Levees Roundtable to reach a consensus among the flood control and resource management agencies for managing vegetation on the Central Valley levees. Integrating environmental efforts into flood management will improve funding prospects, public support, and timely delivery of system improvements and enhanced public safety.

Improve Stakeholder Understanding of Residual Flood Risk

No matter how much we improve the flood management system, flood risk will never be eliminated in the Central Valley. The Board will collaborate with stakeholders and other agencies within the Board's jurisdiction to ensure that residual flood risks are recognized, understood, communicated and appropriately addressed in emergency response and recovery plans. We will work with stakeholders to improve their understanding of residual risks, the real time tools available to determine the likelihood of floods, and the development of proactive flood emergency warning and response plans.

“... The real challenge lies in preparing for California’s inevitable future floods by accommodating natural river flows where possible and by improving flood control systems ...”

Excerpt from David Kennedy,
Former Director, Department of Water Resources,
foreword to the 1997 edition of Robert Kelley’s
Battling the Inland Sea

State of California

Edmund G. Brown Jr., Governor

California Natural Resources Agency

John Laird, Secretary



Central Valley Flood Protection Board Members | 2012

Benjamin Carter, Board President

Teri Rie, Board Vice-President

Frances “Butch” Hodgkins, Board Secretary

Emma Suarez, Board Member

John Brown, Board Member

Michael Villines, Board Member

Jane Dolan, Board Member

Assemblyman Jared Huffman, Ex-Officio Member

Senator Fran Pavley, Ex-Officio Member

Staff

Jay S. Punia, Executive Officer

Len Marino, Chief Engineer

Eric Butler, Supervising Engineer

Curt Taras, Supervising Engineer

Lorraine Pendlebury, Staff Analyst

Jennifer Bingaman, Administrative Officer

Amber Woertink, Staff Assistant

Board Counsel

Deborah Smith



Moulton Weir (foreground) and the Sutter Buttes,
February 26, 1958



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